Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-46. (Canceled)

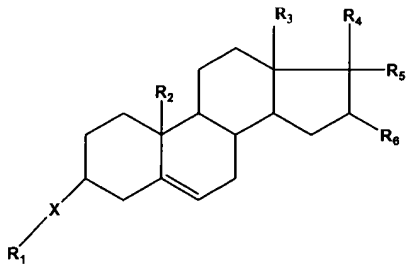
Claim 47. (Currently Amended): ~~The method of claim 44~~ A method of decreasing melanin production in a melanocyte, comprising contacting the melanocyte with an effective amount of a compound that effects an alteration in late endosomal/lysosomal trafficking in the melanocyte, the alteration resulting in a decrease in melanin production in the melanocyte, ~~wherein the alteration in late endosomal/lysosomal trafficking is effected by~~ the method comprising contacting the melanocyte with a compound selected from the group consisting of

(a) progesterone,

(b) a hydrophobic amine selected from the group consisting of phenothiazine, and a tricyclic antidepressant,

(c) sphingosine, and

(d) a compound of the formula



(I)

wherein X is O or S;

R_1 is $-C(O)(C_1\text{-}C_6)$alkyl or $-(CH_2)_n\text{-}O\text{-}(C_1\text{-}C_6)$alkyl, or $-(CH_2)_n\text{-}NR_7R_8$ where n is 0-3, and where each of R_7 and R_8 are independently selected from H and $(C_1\text{-}C_6)$alkyl;

R_2 is H or $(C_1\text{-}C_6)$alkyl;

R_3 is H or (C_1-C_6)alkyl;

R_4 is –C(O)(C_1-C_6)alkyl;

R_5 is H or –(C_1-C_6)alkyl; or R_4 and R_5 together are =O; and

[[R6]] R_6 is H or –(C_1-C_6)alkyl or –$(CH_2)_n$–NR_9R_{10} where each of R_9 and R_{10} are independently selected from H and (C_1-C_6)alkyl; or R_5 and R_6 taken together with the carbon atoms to which they are attached form a C_5-C_8 carbocyclic ring, the ring being optionally substituted by one to three substituents selected from halogen, OH, -(C_1-C_6)alkyl, -C_1-C_6)alkoxy, amino, =O, (C_1-C_6)alkylamino, di-(C_1-C_6)alkyl)amino, trifluoromethyl, and -OCF_3.

Claim 48. (Original): The method of claim 47, wherein the compound is progesterone.

Claim 49. (Currently Amended): The method of claim 47, wherein the compound is a hydrophobic amine selected from the group consisting of a phenothiazine and a tricyclic antidepressant.

Claim 50. (Canceled): The method of claim 49, wherein the hydrophobic amine is selected from the group consisting of a phenothiazine, and a tricyclic antidepressant.

Claim 51. (Currently Amended): The method of claim [[50]] 49, wherein the compound is a phenothiazine.

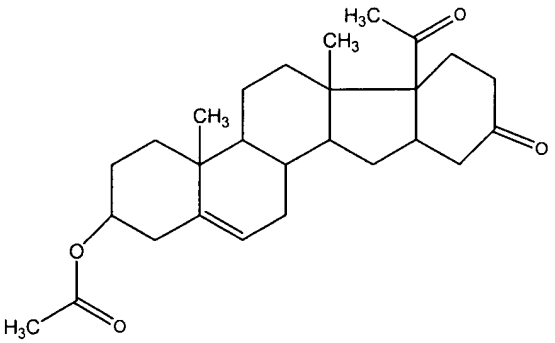
Claim 52. (Original): The method of claim 51, wherein the phenothiazine is selected from the group consisting of trifluoperazine, chlorpromazine, prochlorperazine, triflupromazine, promazine, thioridazine, mesoridaine, piperacetazine, perphenazine, fluphenazine, acetophenazine, and thiethylperazine.

Claim 53. (Currently Amended): The method of claim [[50]] 49, wherein the compound is a tricyclic antidepressant.

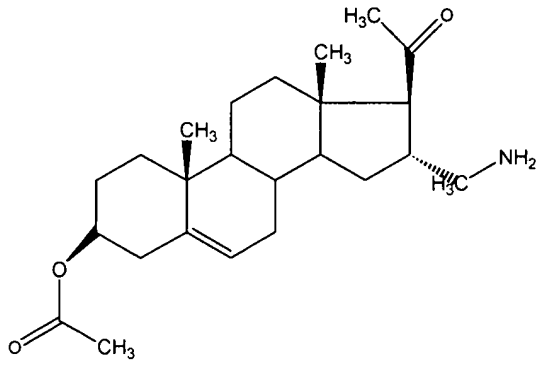
Claim 54. (Original): The method of claim 53, wherein the tricyclic antidepressant is selected from the group consisting of imipramine, nortriptyline, protriptyline, trimipramine, and doxepin.

Claim 55. (Original): The method of claim 47, wherein the compound is sphingosine.

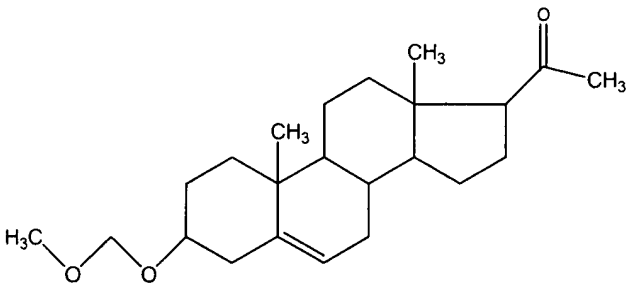
Claim 56. (Currently Amended): The method of claim 47, wherein the compound is selected from the group consisting of:



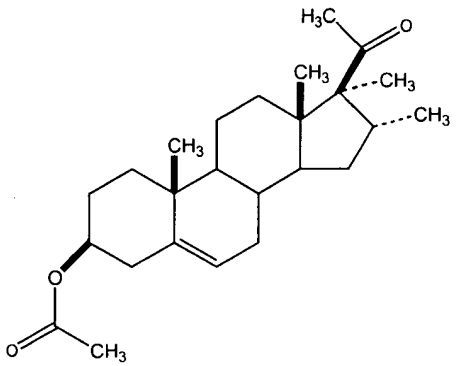
(II)



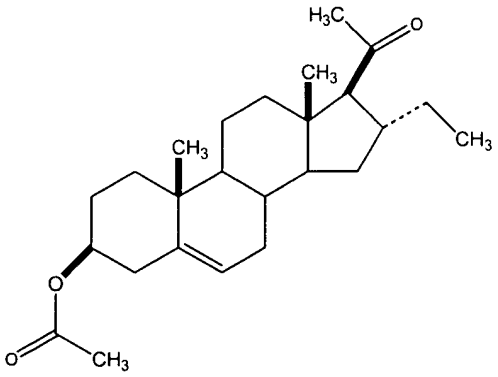
(III)


O
CH3
CH3
CH3
H3C
O
O

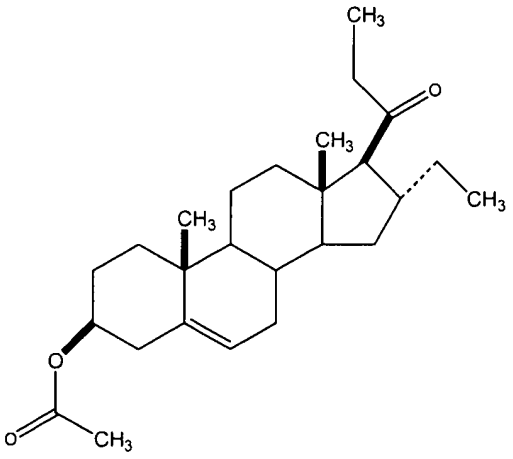
(IV)


H3C
O
CH3
CH3
CH3
CH3
O
O
CH3

(V)

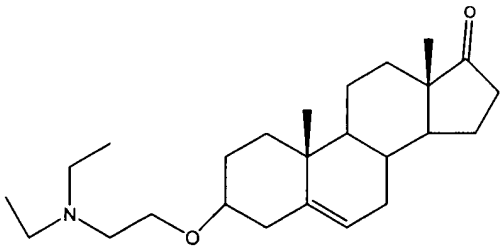

H3C
O
CH3
CH3
CH3
O
O
CH3

(VI)



(VII)

~~and~~



(VIII)

[[or]] and a pharmaceutically acceptable salt or solvate thereof.

Claim 57. (Canceled): A method of reducing skin pigmentation, comprising contacting skin with a pharmaceutically effective amount of a compound that effects an alteration in late endosomal/lysosomal trafficking, wherein an alteration in late endosomal/lysosomal trafficking results in a reduction of skin pigmentation.

Claim 58. (Canceled): The method of claim 57, wherein an alteration in late endosomal/lysosomal trafficking is effected by contacting the skin with a compound that is an antagonist of late endosomal/lysosomal trafficking.

Claim 59. (Canceled): The method of claim 57, wherein the alteration in late endosomal/lysosomal trafficking is an alteration in late endosomal/lysosomal cholesterol trafficking.

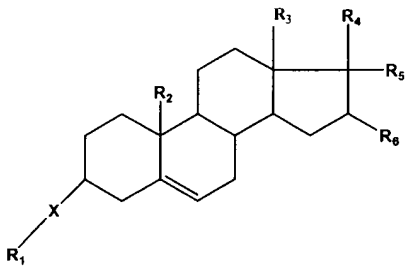
Claim 60. (Currently Amended): A method of reducing skin pigmentation, comprising contacting skin with a pharmaceutically effective amount of a compound that effects an alteration in late endosomal/lysosomal trafficking, the alteration in late endosomal/lysosomal trafficking results in a reduction of skin pigmentation, ~~The method of claim 57, wherein the alteration in late endosomal/lysosomal trafficking is effected by~~ the method comprising contacting the skin with a pharmaceutically effective amount of a compound selected from the group consisting of

(a) progesterone,

(b) a hydrophobic amine selected from the group consisting of phenothiazine, and a tricyclic antidepressant,

(c) sphingosine, and

(d) a compound of the formula



(I)

wherein X is O or S;

R_1 is $-C(O)(C_1\text{-}C_6)$alkyl or $-(CH_2)_n\text{-}O\text{-}(C_1\text{-}C_6)$alkyl, or $-(CH_2)_n\text{-}NR_7R_8$ where n is 0-3, and where each of R_7 and R_8 are independently selected from H and $(C_1\text{-}C_6)$alkyl;

R_2 is H or $(C_1\text{-}C_6)$alkyl;

R_3 is H or $(C_1\text{-}C_6)$alkyl;

R_4 is $-C(O)(C_1\text{-}C_6)$alkyl;

R_5 is H or $-(C_1\text{-}C_6)$alkyl; or R_4 and R_5 together are =O; and

R_6 is H or $-(C_1\text{-}C_6)$alkyl or $-(CH_2)_n-NR_9R_{10}$ where each of R_9 and R_{10} are independently selected from H and $(C_1\text{-}C_6)$alkyl; or R_5 and R_6 taken together with the carbon atoms to which they are attached form a $C_5\text{-}C_8$ carbocyclic ring, the

ring being optionally substituted by one to three substituents selected from halogen, HH, -(C_1-C_6)alkyl, -C_1-C_6)alkoxy, amino, =O, (C_1-C_6)alkylamino, di-(C_1-C_6)alkyl)amino, trifluoromethyl, and OCF_3.

Claim 61. (Original): The method of claim 60, wherein the compound is progesterone.

Claim 62. (Currently Amended): The method of claim 60, wherein the compound is a hydrophobic amine selected from the group consisting of phenothiazine and a tricyclic antidepressant.

Claim 63. (Canceled): The method of claim 62, wherein the hydrophobic amine is selected from the group consisting of a phenothiazine and a tricyclic antidepressant.

Claim 64. (Currently Amended): The method of claim [[63]] 62, wherein the compound is a phenothiazine.

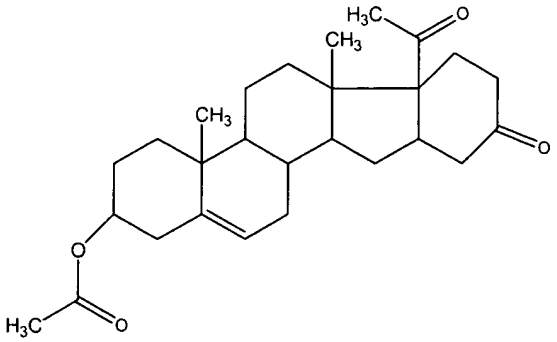
Claim 65. (Original): The method of claim 64, wherein the phenothiazine is selected from the group consisting of trifluoperazine, chlorpromazine, prochlorperazine, triflupromazine, promazine, thioridazine, mesoridaine, piperacetazine, perphenazine, fluphenazine, acetophenazine, and thiethylperazine.

Claim 66. (Currently Amended): The method of claim [[63]] 62, wherein the compound is a tricyclic antidepressant.

Claim 67. (Original): The method of claim 66, wherein the tricyclic antidepressant is selected from the group consisting of imipramine, nortriptyline, protriptyline, trimipramine, and doxepin.

Claim 68. (Original): The method of claim 60, wherein the compound is sphingosine.

Claim 69. (Currently Amended): The method of claim 60, wherein the compound is selected from the group consisting of:



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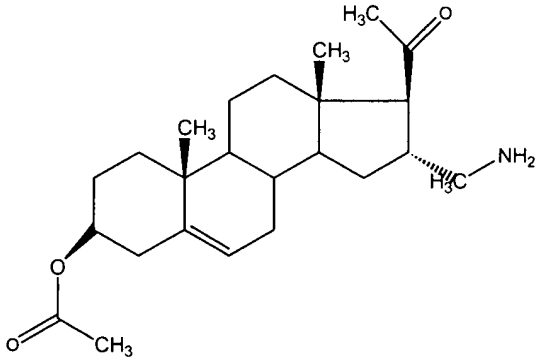

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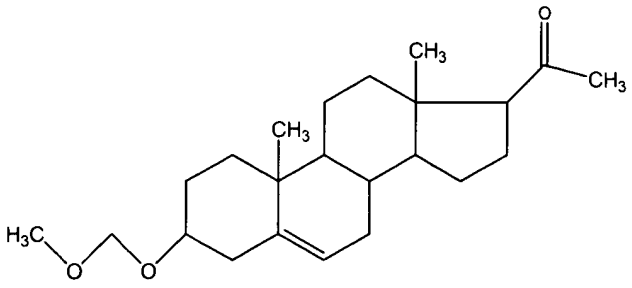

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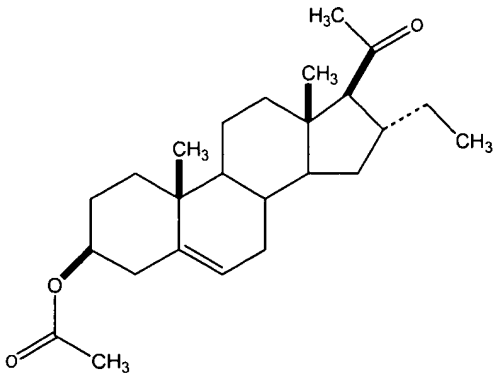

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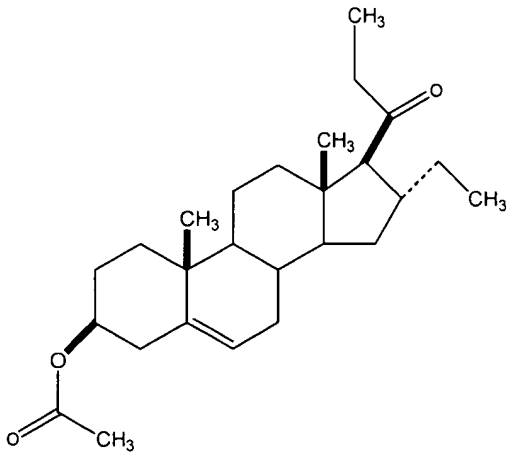
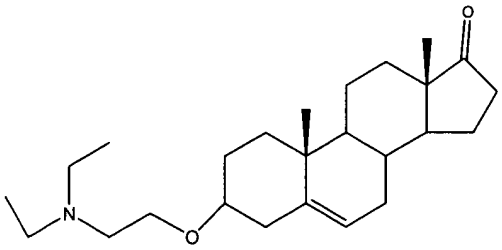


(VII)

~~and~~



(VIII)

[[or]] and a pharmaceutically acceptable salt or solvate thereof.

Claims 70-77. (Canceled)